

Installation - Subtended Network

This section discusses installation procedures for adding subtended 6100s to a subtending host 6100. In this manual, the term “subtending” refers to the host 6100 node, and “subtended” refers to the downstream 6100 node in a subtended network.

All 6100s in a subtended network are installed in either a Digital Off-Hook (DOH) or a direct connect configuration first. Then if the network is to be subtended, the procedures in this section apply.

8.1 Cabling Configuration - Subtending

This section provides an illustration showing the cabling requirements for a subtended 6100.

8.2 Installation Procedures - Subtending

The following table shows a check list of the installation steps for subtended 6100s. Then subsequent subsections, as noted in the last column of the Table 8-1, discuss each of the installation steps in detail.

Table 8-1 Installation Steps Checklist

Check	Installation Step
	1. Install each of the Cisco 6100s in the system, including the subtended ones, with either DOH or direct connect configuration as described in previous sections
	2. Connect the DS3 subtending card to the MC backplane
	3. Install the 2x DS3 subtending host module (STM) in slot 9 of the subtending host 6100 and the DS3 NI module in slot 10 of the subtended node MC
	4. Cable the DS3 subtending I/O card on the subtending host MC to the system I/O card on the subtended node MC
	5. Complete the installation as described in the previous chapters, provision and test

MC=multiplexer chassis
NI=network interface

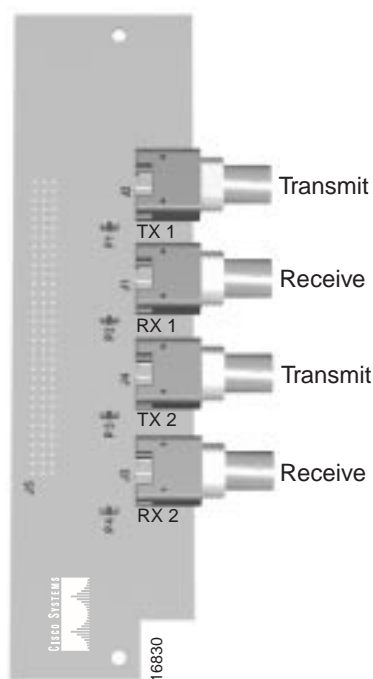
8.2.1 Installing the 6100s

Before connecting the subtended node 6100s to the subtending host 6100, install and cable all the 6100s, including the subtended ones, according to the procedures described in Chapters 5, 6, and 7 of this manual. Subtending is independent of the configuration style used. It works with both DOH and direct connect.

8.2.2 Connecting the DS3 Subtending Card

The DS3 subtending I/O card has two sets of DS3 75-ohm coaxial BNC connectors. Each set consists of a transmit and a receive connector. The following figure illustrates the 2x DS3 subtend card.

Figure 8-2 DS3 Subtend Card



Connect the DS3 subtending I/O card to connector J48, a 96-pin DIN connector, on the subtending host 6100 MC backplane. Refer to the Figure 8-3 for the location of these connectors.

Figure 8-3 DS3 Subtending Card Connector

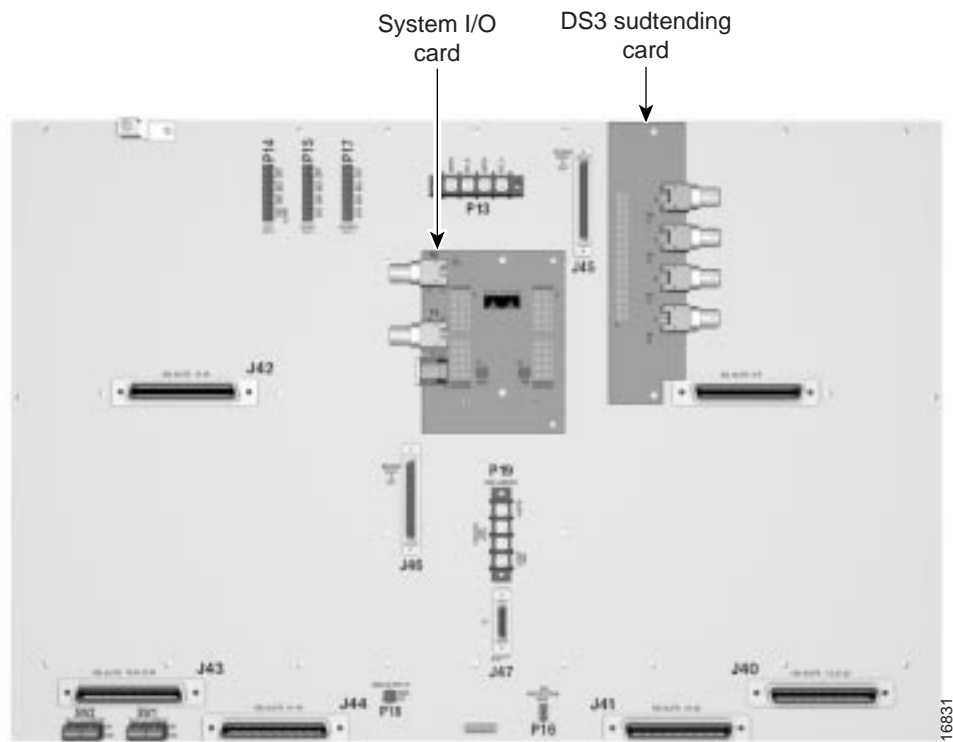
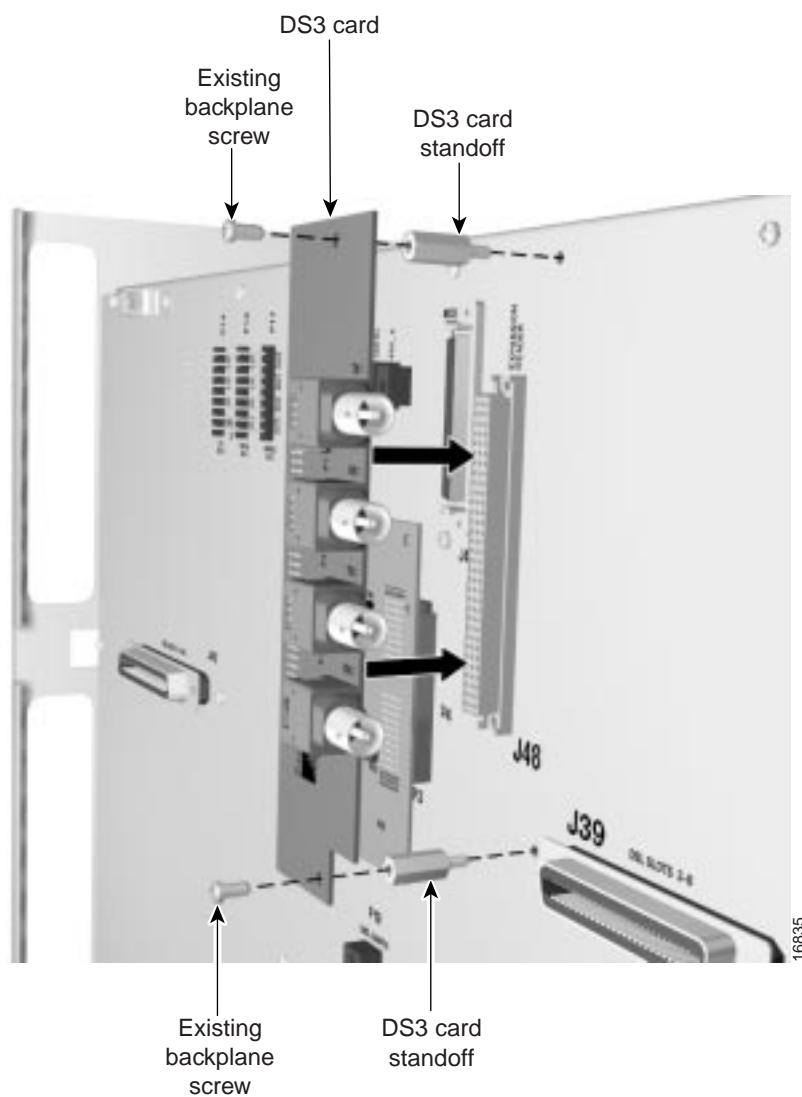


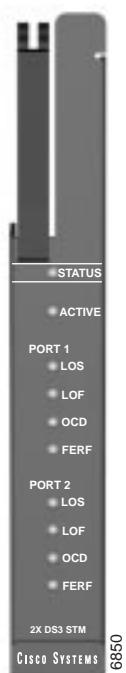
Figure 8-4 DS3 Subtend Card - Standoffs

See Figure 8-1 for an illustration of the cabling between the system I/O card on the subtended node 6100 and the DS3 subtend card on the subtended 6100.

8.2.3 Installing the DS3 Subtend Module

The DS3 NI module should be installed in slot 10 of the host 6100 before the ATU-Cs are installed in the subtended node 6100. The DS3 subtend module should be installed in slot 9 of the subtending host 6100. The following figure illustrates the front panel of the DS3 subtending host module. See Table 9-6 for a description of the LEDs on the subtending host module.

Figure 8-5 DS3 Subtending Host Module



Caution Proper electrostatic discharge (ESD) protection is required at all times when handling modules. Installation and maintenance personnel should be properly grounded via ground straps to eliminate the risk of ESD damage when handling modules. Modules are subject to ESD damage upon removal from their anti-static shipment bag.

8.2.4 Cabling the System I/O Card to the DS3 Subtend Card

On the system I/O card are coaxial connections for DS3 cabling when a DS3 NI module is installed in the 6100 or when a 6100 is subtended. See the “Connecting the DS3 Subtending Card” section for more information on the NI modules. See Figure 7-9 for an illustration of the system I/O card. See Figure 8-2 for an illustration of the DS3 subtend card.

Cable the system I/O card to the DS3 subtending I/O card as shown in Figure 8-1. The transmit connector on the subtending I/O card cables to the receive connector on the subtended system I/O card, and vice versa.

Cisco recommends that ferrite beads be added to the coaxial cables used to cable the DS3 subtend card to the system I/O card to reduce the radiation/EMI susceptibility to high frequency noise between 30 and 200 MHz.

Using either the ferrite beads shipped with the DS3 NI module (type 43) or ones that use ferrite material type 43 or 44 with an impedance of >200 ohms $\pm 20\%$ at 100 MHz, attach the beads close to the transmit and receive BNC connectors on the DS3 subtend card. See Figure 8-2 for the location of the BNC connectors.

If you are using thick type 734A coaxial cable, run the cable through the ferrite bead and clamp it shut, as shown in Figure 8-6.

Figure 8-6 Thick Coaxial Cable through Ferrite Bead



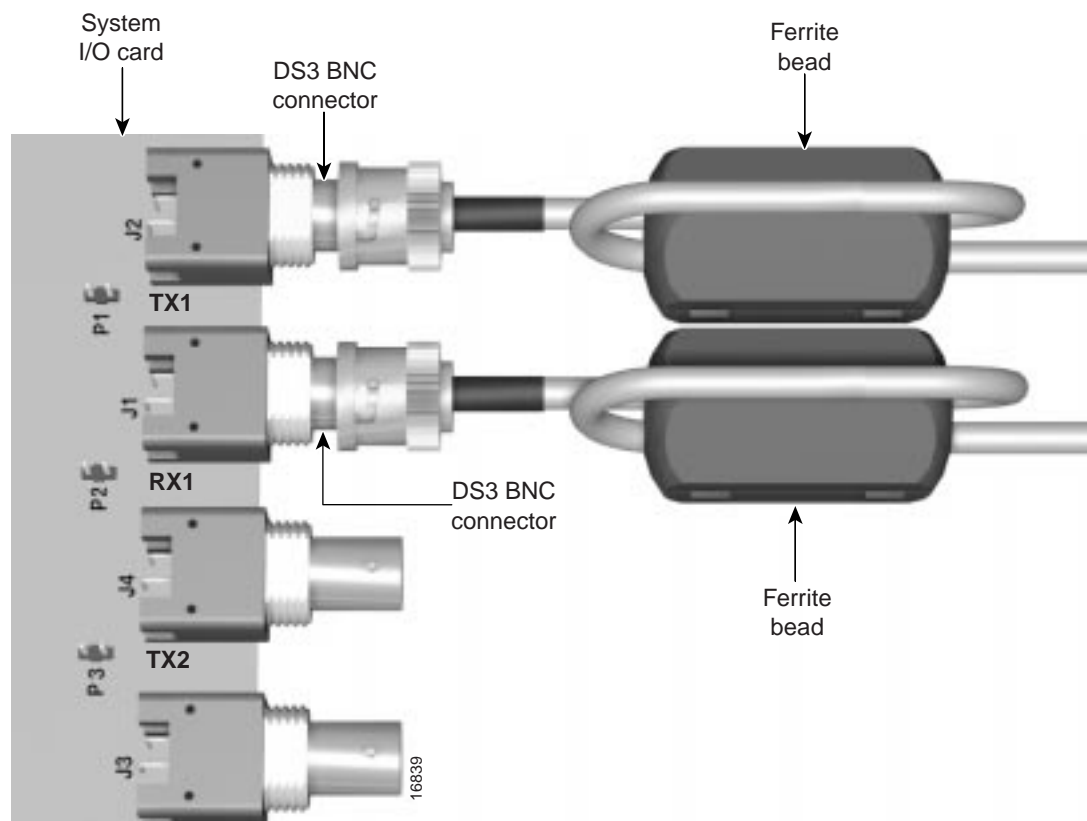
If you are using thin type 735A coaxial cable, run the cable through once, then loop it back through the ferrite bead and clamp it shut, as shown in Figure 8-7.

Figure 8-7 Thin Coaxial Cable through Ferrite Bead



Figure 8-8 shows the ferrite beads on the coaxial cable close to the BNC connectors on the DS3 subtend card.

Figure 8-8 Ferrite Beads Close to BNC Connectors



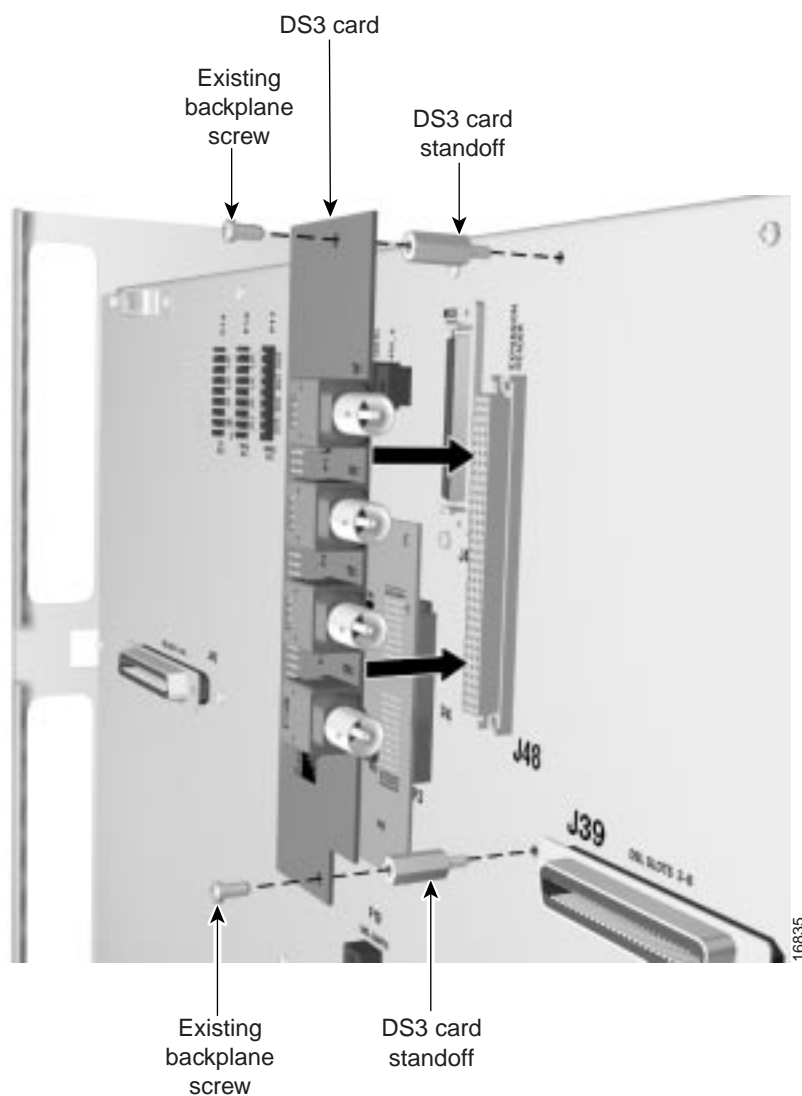
8.2.5 Completing the Installation

When the system I/O card on the subtended node and the DS3 subtending I/O card on the subtending host have been cabled and the DS3 subtending host module has been installed, complete the installation, provisioning, and connectivity tests as described in previous chapters of this manual.

8.3 Adding a DS3 Subtend Card

If you have an existing MC and you need to add a DS3 subtend card, you will need to remove two of the screws from the backplane, add the standoffs shipped with the card, and reuse the two screws. See the following figure for an illustration.

Figure 8-9 Adding Standoffs for a DS3 Card



If you are installing the DS3 subtending I/O card on a new (2.2) MC, standoffs for mounting the card are already in the card cage and the screws to mount the card are included in the package.

If you are installing the DS3 subtending I/O card on an older MC, you will need to add the standoffs to mount the card. The following procedures describe how to add the standoffs. Figure 8-4 illustrates the procedure.

- 1** Remove the two screws currently used to hold the backplane to the chassis above and below the DS3 connector (J48).
- 2** Install the standoffs included with the DS3 I/O card in the same location as the screws you just removed.
- 3** Connect the DS3 I/O card to connector J48 as shown in Figure 8-4.
- 4** Reuse the screws removed in Step 1 to hold the DS3 I/O card to the backplane.

